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| 09/554,219      | 08/14/2000  | Kunio Ninomiya       | 43890-416           | 6492             |

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| EXAMINER |
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NATNAEL, PAULO S M

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| ART UNIT | PAPER NUMBER |
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2614

DATE MAILED: 11/07/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/554,219

Applicant(s)

NINOMIYA ET AL

Examiner

Paulos M. Natnael

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4,7,8 and 10 is/are rejected.
- 7) ☒ Claim(s) 2,3,5,6 and 9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

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## DETAILED ACTION

### *Drawings*

1. Figure 10 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
2. The drawings are objected to because Figs. 1, 9, and 10 some blocks are not labelled. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “circuit for processing the difference of all reception data”, “a circuit for detecting the differential value...” and “a circuit for detecting the differential value only for the data of synchronous signal” in Claim 6, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

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*Claim Rejections - 35 USC § 112*

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims **1,4,7,8, and 10** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim **1**, the claimed “showing the positive or negative sign” is not clear which sign it is referring to.

In claim **4**, the claimed phrase “the differential value” lacks antecedent basis.

In claim **4**, the claimed phrase “which should be of same level by nature” is vague and indefinite because it is not clear compared to or with what is it “of the same level”.

In claim **7**, the claimed phrases “the differential value” and “the clock phase error” lack antecedent basis.

Also in claim **7**, the claimed phrase “which should be of same level by nature” is vague and indefinite because it is not clear compared to or with what is it “of the same level”.

In claim **8**, the claimed phrase “the synchronous signal” lacks antecedent basis.

In claim **8**, the claimed phrase “the reference is determined” is not clearly which reference it is referring to, rendering the claim indefinite.

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In claim **10**, the claimed phrase “the AGC” lacks antecedent basis.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims **1,4, and 7** are rejected under 35 U.S.C. 102(b) as being anticipated by **Krishnamurthy et al.**, U.S. Pat. No. 5,508,748.

Considering claim **1**, the claimed circuit for establishing the synchronous signal in reception data processing the most significant bit (MSB) showing the positive or negative sign of the reception transport packet data is met by slicer and generator 36, Fig.5. (See also col. 6, lines 27-35 and 45-55)

Considering claim **4**, wherein the differential value of synchronous signals of reception packet data which should be of same level by nature is determined so as to detect the clock phase error of transmission data, and the clock is regenerated by phase control on the basis of this phase error is met by the disclosure that “Converter 38 further includes a divider 52 which is also reset by FSYNC to synchronize its operation with the beginning of each data frame 10. In particular,

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divider 52 is a divide-by-208 counter which is clocked by the Byte Clock generated by divider 50 to generate a Begin RS Block signal for identifying the beginning of each block of 208 data bytes synchronously with the first data byte of each data frame..." ( Col. 9, lines 7-15) and "Also, by referencing the system to the highest byte clock rate, increased burst error protection will be provided as the VSB mode and the corresponding byte rate decrease, because the interleave pattern is effected over a given number of bytes regardless of VSB mode. (Col. 9, 41-45)

Considering claim 7, wherein the clock is regenerated by detecting the clock phase error from the differential value of the data which should be of same level by nature coinciding with the synchronous signal code pattern of reception data until the synchronous signal of reception packet data is detected and established;

Regarding claim 7, see rejection of claim 4.

8. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Citta et al. , U.S. Pat. No. 5,602,595.

Considering claim 1, Citta discloses all claimed subject matter, note;

a) the claimed circuit for establishing the synchronous signal in reception data...is met by Sync and Timing circuit 42 (Fig.4), which detects "data segment syncs...from the synchronously detected random data". (col. 3, lines 49-50).

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b) the claimed processing the most significant bit (MSB) showing the positive or negative sign of the reception transport packet data” is inherent because for example Citta is manipulating or processing the bytes of the Header data from 4 bytes to 3 bytes in the MPEG transport Packet w/o Sync (FIG. 3B).

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims **8 and 10** are rejected under 35 U.S.C. 103(a) as being unpatentable over Citta et al., U.S. Pat. No. 5,602,595.

Considering claim **8**, wherein the synchronous signal in the received packet data is detected, the difference between the detected data value of synchronous signal and the reference is determined, and the AGC is realized on the basis of this difference.

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Regarding claim 8, Citta does not specifically disclose AGC realization based on the difference between the detected data value and the reference signal. However, Examiner here takes Official Notice in that it is well known in the art that signal gain is automatically controlled within specified limits with respect to a reference frequency and, thus, it would have been obvious to those with ordinary skill in the art at the time the invention was made to modify the system of Citta in order to provide it with an AGC signal to maintain the overall gain of the system at a constant or desired level.

Considering claim 10, wherein the AGC is realized by detecting the amplitude difference from the envelope of analog detected base band signal until the synchronous signal of reception packet data is detected and established.

Regarding claim 10, see rejection of claim 8.

***Allowable Subject Matter***

11. Claims 2-3, 5-6, 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

12. The following is a statement of reasons for the indication of allowable subject matter: the prior art fails to disclose a digital broadcast demodulator comprising a synchronous code pattern



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detecting circuit for detecting the segment synchronous code pattern from the most significant bit signal of the reception packet data, a symbol number counter for counting the number of symbol data in the reception packet data, a synchronous detection circuit for judging the true segment synchronous code pattern by obtaining the segment synchronous code pattern from said synchronous code pattern detecting circuit when said symbol number counter finishes counting of a specified number, and a synchronism detection protection counter for detecting and establishing the segment synchronous signal in the reception data from the output of said synchronous code pattern detecting circuit and count-up of specified number of said symbol number counter, as in claim 2;

Wherein the most significant bit signal of the reception packet data is processed so as to issue a signal showing the start position of the synchronous signal in the data and a signal of detecting and establishing the synchronous signal, as in claim 3;

A clock phase error detecting circuit for issuing a clock phase error of transmission data by determining the difference of the N-th and N+1-th ( $N > 1$ ) synchronous signals which should be of same level by nature, from the code pattern detection signal of synchronous signal and signal showing position of synchronous signal, as in claim 5;

A circuit for processing the difference of all reception data, a circuit for detecting the differential value only for the data coinciding with the code pattern of synchronous signal, and a circuit for detecting the differential value only for the data of synchronous signal, as in claim 6;

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An AGC error detecting circuit for detecting a specific position of synchronous signal from the signal showing detection and establishment of synchronous signal in the reception data and the signal showing position of synchronous signal, and issuing the error of the synchronous signal at this specific position and the reference value as a control signal, as in claim 9.

### *Conclusion*

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Acampora et al., U.S. 5,847,779 discloses synchronizing a packetized digital data stream to an output processor in a television signal processing system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Paulos Natnael** whose telephone number is **(703) 305-0019**. The examiner can normally be reached on **Monday through Friday** from **6:30 a.m.** to **3:00 p.m.**

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **John Miller**, can be reached on **(703) 305-4795**.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

(703) 872-9314, (for formal communications intended for entry)

**or:**


(703) 872-9314 (for informal or draft communications, please label "PROPOSED" OR "DRAFT").

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, V.A. Sixth Floor (Receptionist).

**Paulos M. Natnael**

November 2, 2002

*PMM*

  
JOHN MILLER  
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